

OF CAST-IRON RAIL ROADS.

RAIL-ROADS have hitherto been constructed as a medium between lock-canal and cartage; in consequence of the expence of extending the canal to the particular works in its neighbourhood.

But as the small boats so materially reduce the expence of canals, they come nearer to the expence of rail-roads, with which they must now be compared. The usual estimate of rail-roads is about 1,600 l. per mile, which are single, with passing places, and only calculated for a descending trade; the whole being formed of a gradual descent from the works to the canal; generally so calculated, that a horse may return the empty waggons with the same ease the full ones descend; on these the average work is about five tons to a horse, descending at the rate of three miles per hour, or one ton ascending, at near the same speed; on which the wear of waggons is very considerable; which wear must generally fall on the company; while the loading into waggons, then unloading at the canal, where there is usually a deposit for want of boats, and again, loading into boats, tends to increase the expence of conveyance, and injure the various articles.

There can no idea be formed of the expence of a canal compared with a rail-road, without being acquainted with the circumstances; but these should be well considered before a rail-way is laid down; and the canal should considerably surpass the expence of the rail-road, *particularly if the length is greater than two miles,*